EXAMINING PRODUCT AND EXTERNAL FACTORS AFFECTING THE SATISFACTION OF SMARTPHONE CONSUMERS

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MASTER OF SCIENCE (INTERNATIONAL BUSINESS)

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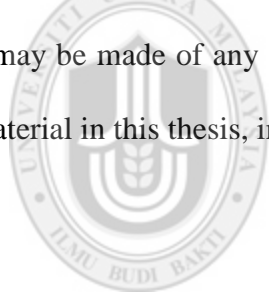
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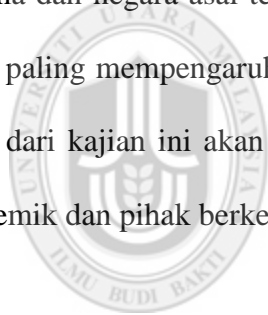
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ABSTRACT

Smartphone is a fast growing product in electronic industry and it has been considered important for most of the people following its diversity of its use. The purpose of this study is to identify factors that affect satisfaction of customer after purchasing the product. The study employs quantitative method by surveying Generation Y among in Northern region of Malaysia with 382 respondents was participated. This study employs the Descriptive analysis, Correlation analysis, and Multiple Regression analysis. The results of this study are supported that product judgment, product feature, social influence, brand image and country of origin are correlate significantly with customer satisfaction. Meanwhile, the most influential element on customer satisfaction is product judgment. A discussion of the result of this study will form the basis recommendation for local producers, academicians and other stakeholders of the smartphone industry in Malaysia.

ABSTRAK

Telefon pintar telah berkembang pesat dalam industri elektronik dan ianya dianggap penting untuk kebanyakan orang oleh kerana kegunaannya yang pelbagai. Tujuan kajian ini dilaksanakna adalah untuk mengenalpasti beberapa faktor yang mempengaruhi kepuasan pengguna telefon pintar selepas pembelian produk tersebut. Kajian ini menggunakan kaedah kuantitatif dengan tinjauan keatas Generasi Y di kawasan utara Malaysia dengan jumlah responden yang terlibat seramai 382 orang. Kajian ini juga menggunakan analisa deskriptif, analisa korelasi dan analisa regresi pelbagai. Hasil dari kajian ini telah menunjukkan penilaian produk, ciri-ciri produk, pengaruh rakan sebaya, jenama dan negara asal telah mempengaruhi kepuasan pelanggan. Sementara itu, unsur yang paling mempengaruhi kepuasan pelanggan adalah penilaian produk. Perbincangan hasil dari kajian ini akan menjadi cadangan asas kepada pengeluar tempatan, ahli-ahli akademik dan pihak berkepntingan lain di dalam industri ini di Malaysia.

ACKNOWLEDGMENT

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LIST OF ABBREVIATIONS

COMDEX – Computer Dealer's Exhibition

COO – Country of Origin

CSL – Commitment Service Loyalty

IBM – International Business Machines Corp

iOS – iPhone Operating System

MMS – Multimedia Messaging Service

MyIX – The Malaysian Internet Exchange

OS – Operating System

PDA – Personal Digital Assistant

SMS – Short Message Services

SPSS – Statistical Package for the Social Science

TPB – Theory of Purchased Behavior

TRA – Theory of Reasoned Action

UniMAP – Univeristi Malaysia Perlis

VIF – Variance Inflation Factor

CHAPTER ONE

INTRODUCTION

1.1   Overview

Smartphone industry receives attention from manufacturers to promote electronic devices into the market and cope with the market trend switching from conventional mobile phones to more advanced software-equipped phones. This study is conducted with the hope that it could help local producers targeting Malaysian customers by looking from customers' perspectives towards the products and staying competitive in this industry. Chapter one discusses issues relating to the intentions to purchase smartphone by Malaysians Generation Y. The starting of this chapter will focus the background of the study, research gaps, research problems, research questions and objectives as well as the scope of the study. Later, it will be followed by the significance of the study of which contributes to marketing knowledge at the end of this chapter.

1.2   Background of Study

The main purpose of this study is to understand the critical factors affecting customer satisfaction of smartphone and to understand better the current dynamics of the Malaysia market for smartphone from the perspective of end consumers based on the Theory of Planned Behavior (TPB). The focus on smartphone product is gaining importance for the

past few years since the increasing popularity of the use of smartphone throughout the country. In fact, smartphone has now become an integral part of the daily lives of many people (Lee et al., 2014). For years, communication across regions and countries are crucially connected by smartphone. Humans have been heavily relying on the use of mobile phones for various activities from personal purposes to business matters. These smartphone have replaced the conventional phones' functions as well as its reliability day after day. Short Message Services (SMS) and Multimedia Messaging Service (MMS) are gradually taking place the standard means of communication other than cost advantage for each message sent.

SMS trends might have been considered as the most effective way of communication until a new era of smartphone takes place since it went on sale in Britain for the first time on November 9, 2007 (Richmond, 2012). Since then, smart phone has changed the way people run their lives. The advent of smartphone boosts Malaysia's internet usage by 51 percent in 2013 (*The Malaysian Insider, 2014*). This statistic was published by The Malaysian Internet Exhange (MyIX) for the country's internet traffic consumption of which the biggest increase ever since a decade ago. The figure showed a total amount of 349,277 Mbps in 2013 as compared to 230,631 Mbps in 2012. These drastic changes are believed to be co-related to several synergistic trends amongst internet users in Malaysia such as the spike in the number of smartphone users. Through this gadget, users get instant access to social networking sites and applications such as Facebook, Twitter and Instagram. Other than these applications, Whatsapp, WeChat, Viber, Line, BeeTalk and some other data messaging applications help contributing to the increase of internet usage in Malaysia. As of May 2013, about 45.5 percent of the

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total Malaysian population or some 13.3 million are Facebook users. Therefore, this puts the country at the 8th spot in Asia and the 21st place in the world (Mahadi, 2013). These hot social networking sites attract Malaysians aged from 18 to 24 to be the highest group users, contributing 34.5 per cent while those aged from 25 to 34 years counted for 29.5 per cent (Mahadi, 2013). The outcome of that research presented how Facebook has indirectly affected their way of communicating.

In the late 2012, Malaysians aged from 21 to 31 were given RM200 rebate to purchase selected 3G smartphone from registered telecommunication providers and this scheme was on a first-come-first serve basis for the first 1.5 million eligible youths. This scheme enabled youths to buy smartphone below RM500 with the aim to spread incentive across lower income youths to be able to use smartphone (Malaysian Communications and Multimedia Commission, 2012). In addition, due to limited mobile phone incentive provided by telecommunication providers to only postpaid contracts while 90 per cent of Malaysian users were in the prepaid segment. Until the rebate period ended, more than 440,000 youths between the given ages had registered for the rebate and some other 60,000 bought their new smartphone in only January 2013, a month after the incentive was announced (The Star Online, 2013). This incentive had led to the rise of smartphone demands by over 50 per cent at the end of January 2013 and this caused a problem to service providers for the package when they did not have enough phones to sell because of the surge in demand. The condition worsen when the government decided to change the price limit of up to RM500 each as one of the service providers received around 10 to 15 new applications daily and this amount was

increasing (International Telecommunication Union, 2013 and The Malaysian Times, 2013).

As people are talking about smartphone, it is hard to disregard the giant names like Samsung, Apple, Sony, BlackBerry and Nokia which originally come from various countries ranging from Korea, United States, Japan, Canada and Finland (Mobile Go Smart, 2014). Not limited to those strong players who have been fiercely competing through dozens of new products introduction, plenty more are and to come operate mainly in Mainland China. Oppo, OnePlus, Coolpad, Xiaomi, Huawei Technologies, Lenovo and ZTE are among of which have gained popularity in 2013 as compared to the previous year (China Daily, 2014). Apart from these foreign brands, Malaysia also has its own smartphone brands namely Commitment Service Loyalty (CSL) and Ninetology.

1.3   Research Problem

This study is focusing on the global business trend regarding specific products available in the market across the nation. With the development in telecommunication industry recently, the entrance of new smartphone makers are intense. To ensure sustainable profit and business, customer retention is an important aspect for the survival of each player in the industry. The local smartphone producers and brands especially in Malaysia are having problem to locate their products and brand in customer mind. They are considered new in this industry compared to the established foreign brands with local presence. Unlike mobile phone era that comes with various design and functionality, smartphone products nowadays are almost similar in product features such as similar in

shape, with wider square screen, equipped and running almost a similar operating system. The functions offered by each smartphone are also similar which are for browsing internet, connecting friends and relatives over social media applications, taking photos and videos, games, and many others which eventually are similar for smartphones that produced by different producers. Since the smartphone usage is popular nowadays, there is a need to examine the factors that are important to customers when they want to purchase this particular product and as well as what are the factors that can satisfy customer in using and owning the product.

Over the past few years, Microsoft software smartphone was unable to take the lead in this industry given the fact that it has most experiences in software creation and computer industry. This is surprising to know as Android smartphone continues to dominate the global smartphone market, nearly 85 percent market share in the second quarter of 2014 that accounted for over 255 million units shipped. In the contrary, Windows Phone and BlackBerry have fallen behind from both Android and iOS device (International Data Corporation, 2014). These changes are explained by similar product category which is called smartphone, with the differentiation based on software or operating system comes with the product that is categorized under product features. Each operating system offered by different producers is slightly different in terms of multitasking, speed, price and interface. This difference could affect users' satisfaction based on different individual usage and needs. For instance, students and younger generation prefer faster software to operate to keep up gaming requirement. Thus, different operating system or features offered might somehow affect users' satisfaction in using the product.

Next, brand image embedded in each smartphone is served as a producer's recognition by consumers. This help customer recognize and differentiate the producers when they are making judgment before and after purchasing is made. Customers are also relying on product when it comes to trust. Brand image of certain product also symbolize social status and recognition among society. Due to this scenario, some customers prefer one particular product over the other due to the fact that some of smartphone brands thrive while leaving the other brands falling behind. Customers chose certain brand over the other.

In the last few years, three smartphone brands hit the market with a couple of models have become the best-selling smartphone in the global market (Epstein, 2013). The trendiest companies are Samsung, Apple and BlackBerry with each market share of 25.5 per cent. The brands that remain competitive in the market are only Samsung and Apple, while leaving BlackBerry dropped in revenue struggling to be in the top list. According to Rocha (2014), the BlackBerry's revenue plunged 64 per cent in the fourth quarter after unfavorable decline to 37 per cent and 40 per cent in the previous quarter of last year. Drop of shares have further aggravated at the end of the same year whose share of the global smartphone market decreased to less than 1 per cent (Page, 2014). Interestingly, at the moment BlackBerry experienced continuous decline in revenue, most of the strongest competitor in the market, which is Samsung was able to make profits during the three months period in 2013.

In Malaysia, local brands are hardly survived in their own market due to higher demand on smartphone with established brand name. According to BBC News (2014), customers are becoming more price-sensitive and less brand-orientated in developed

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market and there are signs of market saturation in developed market. In developing and emerging economies, these markets show stronger growth as compared to the developed markets.

Futhermore, companies are aware of the need to maintain the brand's reputation and corporate image in gaining customers' trust, which subsequently attracting potential customers or retaining existing consumers towards buying their products. According to Rosenthal and Landau (1979) and Kreps and Wilson (1980), the history of past actions done by company reflects a company's reputation.

Consumers are also taking into account about the country of origin when making purchases. They will concern with country produces a product when the product involves highly complex machine to be produced or a country's good reputation for certain product to be recognized. Country of origin denotes a country in which a manufacturer is being located. In this case, local smartphones are hardly selling well electronic brand originates from Malaysia is perceived by consumer as less established and lack of experience compared to smartphone from developed nations. For this reason, this factor could affect the satisfaction of smartphone users.

On the other hand, the majority of Malaysians who use smartphone to surf internet in urban area is 74 per cent while 20 percent in suburban regions (Enterprise IT News, 2011). The lowest rate of smartphone users who surf the internet is in rural area with only 6 per cent of the population. From this group, the majority of smartphone users are aged from 25 to 34 years that covers 41 per cent which generally known as the

Generation Y. These users also fall under well- educated and full-time employment with an income of RM5000 and above (Enterprise IT News, 2011).

According to Ibrahim et. all (2013), northern state of Malaysia which is Perlis was reported to have the lowest smartphone users among all states. Therefore, it is interesting to explore what products and external factors that mostly influence satisfaction of consumers in the northern region. Thus, understanding this market trend could help Malaysian smartphone producers such as Ninetology and Commitment Service Loyalty (CSL) to understand their markets in term of customers' satisfaction and smartphone trends.

1.4   Research Question

This study is carried out to analyze the factors that influence customer satisfaction of smartphone among Generation Y in the northern part of Malaysia, particularly Kedah and Perlis. The following research questions are derived based on the issues previously discussed in the research problem of the current study. These questions are developed in an attempt to find out the actual factors that influence the satisfaction of smartphone. The research questions are as follows:

- What are the consequences of product factors on the customer satisfaction?
- What is the impact of external factors on smartphone consumers?
- Which factors is more influential in fulfilling the customers' satisfaction?

1.5   Research Objective

In order to respond to the research problems and answer the research questions, this particular study is generally aimed to investigate the critical factors that will affect the consumer satisfaction in using smartphone. Specifically, the research objectives are as follow:

- To analyze the consequences of product factors on customer satisfaction.

- To investigate the implications of external factors on customer satisfaction.

- To examine which factors between product and external elements to have greater influence on customer satisfaction in using smartphone.

1.6   Significance of study

This study is important to the local smartphone brands and as well as multinational firms to conduct businesses in Malaysia, particularly in northern areas which become the target population of the research and among the lowest smartphone users (Ibrahim et al., 2013).

The initial findings of this research will provide smartphone producers especially local producers with several aspects expected by potential customers on the end product of the smartphone. This aspect is crucial for producers of smartphone, most notably the two local smartphone producers in Malaysia, Ninetology and Commitment Service Loyalty (CSL). These companies can learn about what factors that are critically concerned by Malaysians. In the past few years they are struggling to sell their smartphones in their own market, which have been dominated by Samsung, a Korean

producer. Samsung releases a dozen of models every year, covering different segments starting from low-end to high-end models.

Based on a research carried out by Samsung Malaysia Electronic, they have observed a shift in trend among Malaysian consumers. It explains that consumers are using more digital technology to improve productivity and enhance their quality of life in 2014 (Yeong, 2014). The companies have gained insight into 'people-first' beliefs and changing needs of its consumers which give consumers what they truly want in a smartphone. Recently, Samsung launches Galaxy S5 smartphone produced based on its focus and determination to continue the innovation and bring people new experiences and new ways of expressing themselves. In addition, it is an advantage to local producers who produce low and medium-end smartphone when the Malaysian market and demand for high-end smartphones will slow down as saturation increases (Yeong, 2014).

In Malaysia, internet always comes in a package as customers get their new smartphone from local telecommunication companies. Various companies offer internet package such as Celcom, Maxis, DiGi, U Mobile, Tune Talk and some others are actively participating in providing their internet services either through contract agreement or postpaid plans. Through smartphone, people are easily connected to the internet and this helps to improve their productivity and communication.

For marketers, it is crucial to maintain their customers after the first purchase. Word-of-mouth is a powerful medium to spread satisfied information from existing customers to potential buyers when social influences are taken into consideration. The

Theory of Planned Behavior's variable of attitude which stipulated that the existing of customer's attitude towards products could induce individual's future purchase or repurchase behavior (Oliver, 1999; Ajzen, 1991).

1.7 Scope of Study

This study will only look into the effects of five factors on customer satisfaction of smartphone such as brand image, product judgment, product features, social influences and country of origin. This study will cover population of the northern regions of Malaysia that include Perlis and Kedah as the sample. The sample will specifically focus on younger generation who is recorded to use smartphone at higher percentage as compared to other generations. This sample is also known as Generation Y which covers respondents aged from 20 to 38 years old. For some reasons explained in the last part of this chapter, this sample is chosen to be the only target group of all populations available because this generation has been recorded as the highest number of internet users in Malaysia (Enterprise IT, 2011). As for the location, suburban area is to be the target area to find the sample as this region covers only 20 percent of active smartphone users compared to urban regions with up to 74 percent. Therefore, it is important for this study to examine the trend and purchase behavior in this segment. By exploring the perception of the younger group and under-explored region, it enables producers to investigate in depth the perception of the future buyers in Malaysia.

1.8 Definitions of Key Concepts

The key concepts that are used in this study are as follow;

1.8.1 Customer Satisfaction

According to Parker and Mathews (2001), satisfaction could be defined as depending on the context in which the word is used. As for this study, customer satisfaction is viewed as an outcome of a consumption activity. It could also be referred to as a process of evaluation from what the customers have received and what they are expecting beforehand (Oliver, 1977).

1.8.2 Smartphone

According to Pandey and Nakra (2014), a mobile phone that features many functions of a computer which typically has a large screen capable of accessing the internet, running downloaded applications and equipped with Operating System (OS) is considered as a smartphone. Features offered in a smartphone have advanced capabilities beyond the functions of conventional mobile phones such as short messaging service and making calls. Even though some of the hardware is equipped with buttons back then as now typically having a touchscreen interface in various sizes. These features ranging from an operating system, web browsing and software applications with running capability are not originally associated with telephones. The origin of this computer-like device was first presented as a concept device rather than a consumer device, named as IBM Simon at the 1992 Computer Dealer's Exhibition (COMDEX) a computer industry trade show in Las Vegas, United States. IBM Simon Personal Communicator has similar functions to cellular phone but in a PDA design engineered by International Business Machines

Corp (IBM). As smartphone is equipped with more advanced computing capability and connectivity than features offered by Personal Digital Assistant (PDAs). Now smartphone has replaced the PDAs functionality by combining with other gadgets that previously function for different purposes such as digital camera, mobile phone and portable music player (Berger, 2012). These four gadgets have been combined to form one device that enables it to perform a myriad of different functions.

In order to make it better than any other PDAs and mobile phones ever invented back in the day, various smartphone features and functions have been invented such as thumbprint in iPhone 5S, iPhone 6 and also iPhone 6 Plus, front-facing camera, crystal clear images, bigger screen size, ample storage capacity, multitasking, auto image stabilization burst mode camera and many others offered under the brand of Samsung, Sony and Apple. (Apple Support, 2014, Samsung, 2014).

1.8.3   Country of Origin (COO)

Country of origin, which will be addressed as COO in the rest of this study is defined as the home country for a company with which consumers infer from a brand name (Kim and Pysarchik, 2000). As for this study, COO denotes a country in which a smartphone being produced and the location of the factory. Jones and Martin (2012) defined COO as the country where manufacturing, production or development of any objects takes place.

There are two main categories of COO; (1) goods wholly produced in a single country and (2) goods whose production involved input and materials coming from more than a country. The latter is more complex as several criteria have to be considered

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which include the origin of each material, the country in which the final phase of production takes place and the value added that covers working and processing stage in each country if they are available (Government.UK, 2013). The product's origin may be judged from the country where it is assembled if the components are manufactured in different countries than the country in which it is assembled.

In international trade, determining the country of origin of a product is important for the purpose of assessing tariffs, statistical purpose, enforcing trade remedies and non-tariff restriction (Jones and Martin, 2012). The non-tariff restriction can be limited in quantity which is also called tariff quotas. To show how important the country of origin's label on each product traded between countries, some countries have imposed restrictions to all trade activities or reduced the exchange of specific goods with certain country as a result of unfavorable political and economic circumstances. The United States embargo against Cuba started in 1960 by the Kennedy's administration executive as a response to the confiscation of American property in Cuba under Castro regime (Hanson et al., 2013). This Embargo is so important to the nation that the United States government devoted hundreds of millions of dollars and thousands of man hours to administer this restriction each year by involving at least ten different agencies (Hanson, et al., 2013)

1.8.4 Product Features

Product features means attributes provided in products as a mean of added functionality to it (Zhang and Narayanan, n.a.). In other words, features are characteristics that each

product has to offer (Entrepreneurship.org, 2007). For instance, a smartphone would be considered as a real smartphone if it is featured with crystal-clear display, a great camera, plenty of storage space, fingerprint sensor and even to the most unique feature ever offered which is wireless charging (Komando, 2013). Nevertheless, of all features offered by a single smartphone, consumers do always complain about the need to have a longer-lasting battery. Even the high-end smartphone ever offered in the market could only sustain between 9 to 12 hours for a single charging. Such models are Samsung Galaxy S4, iPhone 5S and the Galaxy Note 3 (Komando, 2013; Nuckle, 2014).

As compared to product features, benefits are the reasons why customers buy the product such as easily-used, affordability and safety. Features however are only valuable to consumers if they see those particular features as valuable and useful. This can clearly be seen when they buy products as they want to solve a problem and meet a particular need (Entrepreneurship.org, 2007).

1.8.5   Product Judgment

Specifically, product judgment is defined as customers' personal opinions and evaluations with regard to the product. Opinions are formed after different performance and imaginary association are put together (Keller, 2001).

1.8.6   Brand Image

Brand image is defined by Keller (1993) as perceptions about a brand held in the memory of consumers as reflected by the brand association. As for brand itself, it is defined as a combination of a symbol, name, term or design with the purpose to identify and differentiate the goods and services of one seller from its competitors (Keller, 1993). Brand is the most valuable asset for a company which means beyond than just names and symbols, which also the element of relationship between the manufacturer and consumers (Kotler and Armstrong, 2010).

1.8.7   Social Influence

Social influence is the process of pressuring individuals to conform to others' expectations in the hope of behaving in a way that could avoid social disapproval and punishment (Saulwick and Trentelman, 2014; Deutsch and Gerard, 1955). An individual seeks solace in the interpretation of others when he or she is uncertain.

1.8.8   Theory of Planned Behavior (TPB)

Theory of planned behavior helps to understand an individual's behavior and action. It also measures how human actions are guided based on three determinants which are behavioral attitude, subjective norm and perceived behavioral control, and later followed by an individual's intention to perform an action (Ajzen, 1991). This theory is developed

by Ajzen in 1988 as an improvement to the previous model, the Theory of Reasoned Action (TRA).

1.9   Organization of Chapter

The chapters in this study are organized as follow:

Chapter 1: This chapter begins with the overview and background of this study regarding issues and trends of smartphone is Malaysia, followed by research gap, research problems, research questions, research objectives, significance of study, scope of study and conclusion.

Chapter 2: This chapter will discuss briefly on the purchase intention in general. Then, it highlights the relevant researcher regarding the studies and researches done by various past researchers which cover factors that influence the purchase intention of smartphone in other nations and Malaysia in particular. The literature on the variables used in the structured model is reviewed. Then, this chapter will also discuss and develop the theoretical framework until the hypothesis at the end of this chapter.

Chapter 3: This chapter presents the research methodology and justifies the methods used in this study. It will cover research design, survey instrument, population, data collection and technique.

Chapter 4: This chapter will discuss the result of data analysis conducted after the questionnaires are returned to the researcher.

Chapter 5: This chapter will present and discuss the finding of the data analysis.

Chapter 6: As the last section in this study, this chapter will conclude the overall finding and suggest further recommendation for the future research.

1.10   Conclusion

This chapter presents background of study, research gap, research problems, research questions and research objectives. This chapter also gives brief explanation of how this study could be significant for companies, especially local manufacturers and also academics. Then, this chapter also presents new contributions, the scope of the study and key terms' definition. Finally, it concludes the overall structure of the five chapters in this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Advancement in technology and engineering enable producers expanding their production capacity and increasing variety to existing products. The smartphone usage are increasing since the devices are multipurpose and equipped with camera, radio, voice recorder, games, calculator, maps, clock, video and music player, notes, internet browser, social media applications and plenty more. These new generations of mobile devices have gained popularity in global society since 2007 when it reached from 122.32 million to 1,244.89 million users in 2014 (Statista, 2015). Since smartphone comes with preference languages to fit each specific country, it is made possible for consumers in various countries to acquire the devices.

Other contributing factor to the expansion of smartphone worldwide is the trading activities across nations and advertising campaigns in mass media such as television ads, newspapers, brochures, billboards and the Internet. Consumers have many choices when it comes to buying smartphone since the devices are produced by more than the familiar brands which are associated with the devices. Brands originating from developed countries such as Apple, Samsung, BlackBerry, Sony and Nokia are competing fiercely with newer brands from China and other developing countries in

placing their products close to the customers mind. Therefore, satisfaction of customers might be considered from various factors before and after purchasing is made.

Overall, this section will discuss the overview of purchase satisfaction in purchasing and what are the factors that influence the satisfaction of smartphone consumers. Theory of purchase behavior related to this topic will also be discussed in Section 2.3.1. The concept of the research is obtained from previous researches and is divided into several sections. Section 2.4 until 2.10 will discuss about country of origin, product features, brand image, product judgment, social influence and customer satisfaction. Finally, the summary will be highlighted in Section 2.12.

2.2   Smartphone Industry in Malaysia

Malaysia consists of 28.3 million of residents in the year of 2010, with 10 million increased since 1991 (Department of Statistics Malaysia, 2015). This indicated an average annual growth rate of 2.0 percent from 2000 to 2010 period and was considered lower compared to that of 2.6 percent from 1991 to 2010. Putrajaya and Selangor are on top of the list while Perlis, W.P. Labuan, Perak and Terengganu are the lowest with 1.2, 1.3, 1.4 and 1.4 percent respectively. Three states with the most populous states are Selangor, Johor and Sabah with total share of 42.4 percent of total Malaysia population.

Even though Malaysia population are reported to be increasing every year, as new brands of smartphone are being introduced every year has caused this country's market for smartphone to saturate. This concerns smartphone producers since it can slow

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down the demand for smartphone (Yeong, 2014). Mobile phone industry in Malaysia begins from the time when the first cellular network was introduced in 1985 by Telekom Malaysia, a Malaysian telecommunication service company headquarters in Kuala Lumpur. Later in 1989, a country's second 1 Generation operator was started by Celcom and this newer generation making the size of mobile phone smaller and more acceptable. The 2G or second generation of mobile network was introduced in 1990 and in 2005 there were two more cellular operators namely Maxis and DiGi (Osman et al. 2012).

According to Malaysia Communication and Multimedia Commission (2012), only 12 percent of Malaysian users were using smartphone in 2011. However, the number increased to 26 percent when it came to year 2012 as it was supported by number of shipment. In the same year, it was reported that smartphone usage around the world had reached 1 billion units.

Brand is closely related to the operating platform or system used in each smartphone device with different operating system is used for different brands of smartphone. Therefore, a brand name provides a hint to application developer. For instance, iPhone device manufactured by Apple is currently using Apple iOS while Samsung and HTC use Android OS to operate. In 2012, smartphone popular brands are Sony Ericsson, Apple iPhone, BlackBerry and HTC with 34%, 11%, 5% and 4% respectively (Osman et al. 2012). However, since the increasing popularity of bigger touch screen among consumers, new brands leading the Malaysia market are Samsung at the first place, followed by Apple iPhone, HTC, Sony and Nokia (Chew, 2014).

When it comes to features, smartphone undoubtedly has many functions from basic messages to surfing the Internet. There is a fact that approximately three in ten smartphone users in Malaysia exclusively use their smartphone for accessing the Internet (Lee, 2014; Malaysian Wireless, 2014). About 35% of smartphone users depend on smartphone to connect to the Internet making the country among the highest in category. From that, 28% of Malaysians do online shopping while other activities done on smartphone are listening to music (55%), playing online games (50%) and watching online videos (67%).

2.3   Theoretical Framework

Advancement in technology and engineering enable producers to expand their production capacity and increase variety to existing products. Smartphone usage is increasing since the devices are multipurpose and equipped with camera, radio, voice recorder, games, calculator, maps, clock, video and music player, notes, Internet browsers, social media applications and plenty more. These new generations of mobile devices have gained popularity globally since 2007 when it increased from 122.32 million to 1,244.89 million users in 2014 (Statista, 2015). Since smartphone comes with preference languages to fit to each specific country, it is made possible for consumers in various countries to acquire the devices. Other contributing factor to the expansion of smartphone usage worldwide is the trading activities across nations other than advertising campaign in mass media such as television ads, newspapers, brochures, billboards and the Internet. Consumers have many choices when it comes to buy

smartphone since the devices are produced by more than the familiar brands which are associated with the devices. Brands originating from developed countries such as Apple, Samsung, BlackBerry, Sony and Nokia are competing fiercely with newer brands from China and other developing countries in placing their products close to the customers mind. Therefore, the satisfaction of customers might be considered from various factors before and after a purchase is made.

Overall, this section will discuss the factors that affect the satisfaction of smartphone consumers. Theory of purchase behavior related to this topic will also be discussed in Section 2.2.1. The concept of the research is obtained from previous researches and is divided into several sections. Section 2.3 until 2.8 will discuss about country of origin, product features, brand image, product judgment, social influence and customer satisfaction. Finally, the summary is in Section 2.9.
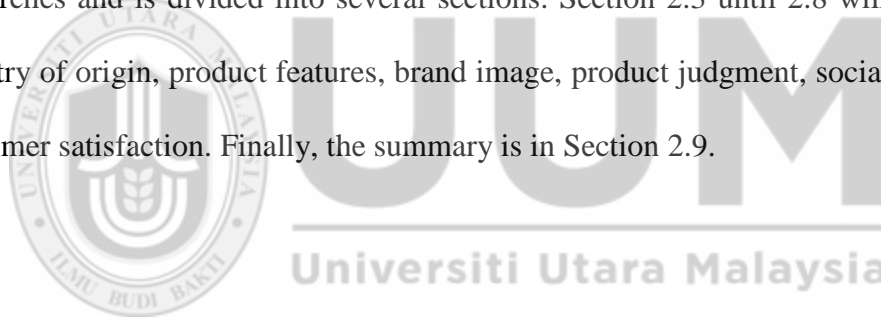
2.3.1 Theory of Planned Behavior

As an extension to the Theory of Reasoned Action (TRA), the Theory of Planned Behavior (TPB) helps researcher to understand how people's behaviors change through predicting deliberate behavior. This theory proposes that people have incomplete power and control for their intention which lead to people's behavior or action. The drivers to this intention consist of three elements which is attitude toward the behavior, subjective norm and perceived behavioral control. An individual's intention to perform or use a certain product is the central factor in this theory. That intention captures motivational factors and become a driver to how hard people are willing to try and later influence a

behavior or to perform a certain action. Therefore, as the intention to engage in a behavior is stronger, the more likely the performance should be.

At some point for the behavior to be implemented, it also depends on several degrees of non-motivational factors which are availability of requisite opportunities and resources which could be translated into skill, money, time and other people's cooperation. Therefore, these non-motivational factors represent individual's actual control over the intended behavior. Unless the resources and opportunities are available to each individual, she or he could not perform the intended behavior successfully (Ajzen, 1991). The intention factor could be translated as motivation while an action or behavioral control could be translated as an individual's ability to perform an action.
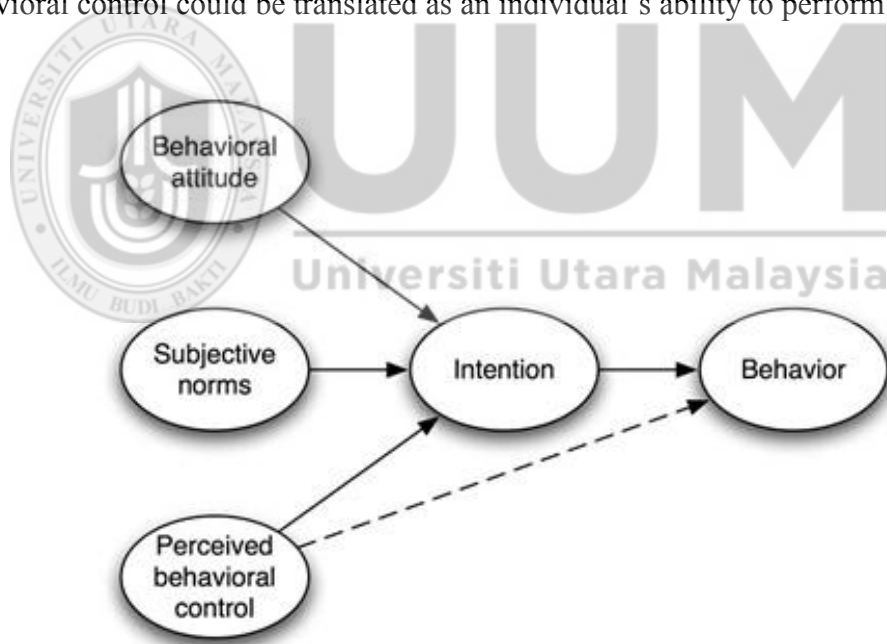
Figure 2.1: Theory of Planned Behavior (TPB)

Perceived behavioral control plays an important role in differentiating the Theory of Planned Behavior to the Theory of Reasoned Action. This determinant in the TPB could be defined as perception of people on how easy or difficult to perform the

behavior. This perceived behavioral control does not remain stable across situation as it involves judgment of several chances of failure to attain an objective such as how well one can execute an action based on individual's past experience.

The second determinant of intention is behavioral attitude which refers to the degree to which an individual questions the behavior through favorable or unfavorable evaluation. The perceived social pressure to perform or not to perform the behavior is the third independent determinant of intention or termed subjective norm or social factor. It combines expectation from groups and individuals. An individual's intention to perform the behavior would be stronger the more favorable and greater of both the attitude and subjective norm and the perceived behavioral control. This theory has been consistent with recent studies of customer's intention to be significantly predicted by three proposed determinant in TPB by Ajzen which is Attitudes, Subjective Norms and Perceived Behavioral Control (Pickett et al. 2012). Also, to be consistent with TPB is intentions are found to be significant in predicting the behavior. Thus, the conclusion is that TPB is the best predictor to satisfaction.

Other studies developed using the TPB is regarding customers in online shopping and their willingness to buy by distinguishing customers into three groups, such as consumers who have not bought anything, bought unrelated groceries and consumers who have bought groceries. The finding revealed consumers may link personal values to attitude but moderated by previous consumers' purchases through online regardless of grocery products and thus supports some suggestions that personal values affect consumers' attitude towards grocery buying (Hansen, 2008).

Link between intention and satisfaction

The previous paragraphs discuss the relationship between the Theory of Planned Behavior (TPB) and customers' intention to purchase. According to Weng and Run (2013), customers' purchase intention and behavioral intention are affected by sales promotion techniques, of which suggest the relationship between intention and satisfaction. In another study carried out by Tuu and Olsen (2012), the satisfaction of customers will increase the purchase intention with the presence of higher perceived certainty as a third variable.

Link between TPB and satisfaction

The Theory of Planned Behavior (TPB) has been used in the past studies involving a wide range of behavioral intentions and actual behaviors, including customers' dissatisfaction response in restaurants. The TPB as shown in the result indicated its applicability to the context of customers' dissatisfaction responses in high-end restaurants as past behaviors to the TPB model exerts significant influence on negative word of mouth communication intention. In other words, past behavior's influence on behavioral intentions to engage in dissatisfaction responses in this study used the TPB variables as a mediator (Cheng, Lam and Hsu, 2005). In this study, attitude as presented in the TPB model is a mediator to the effect of past behavior on intention to negative word of mouth communication while the remaining two variables in the theory mediated between past behavior and voice behavior's intention.

2.4   Previously Related Researches on Customer Satisfaction.

Satisfaction could be defined as a feeling a purchaser experienced after the service used fulfilled an individual's expectation (Kotler et. al. 2000). In a service sector, customer expectation and service delivered are compared to measure their experiences for customer satisfaction (Kusnierz and Gajewska, 2014).

Past studies are focusing on both brands and product in relation to customer satisfaction followed by customer loyalty. Moraga and Paraga (2008) were focusing on products at the first place and later followed by intangible benefit which is brand name. The sample analyzed two different categories of products, with electronic products representing innovative products while wine to represent traditional products category. With most research sample mainly represent buyers of electronic products by 830 people and with a smaller of 393 buyers are wine consumers due to the first product category having greater variety of products and brands in that segment. Conclusion was made where customer satisfaction and loyalty could be achieved differently depending on the different stages of product development in the market starting from introduction to mature stage. Satisfaction achieved at the introduction stage is not high as compared to more mature stage due to scarcity of psychological benefits. Also, satisfied customers varied due to product categories as the innovative products involve intensely in technology development matched by customer's high participation unlike traditional products which is lower.

Similar study has focused on understanding consumer satisfaction across different product groups of three brands with slight differences in questioning whether

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consumers meet expectation and consumer's affective feeling state are unique constructs which have been put into use in the research. Both "meet expectation" and "affective feeling state" are two typical perspectives of consumers' satisfaction discussed under this study (Broyles et al., 2009). Meet expectation measures consumers' evaluations of product after usage while affective feeling state measures customer satisfaction. The finding indicated that the two perspectives are two distinct constructs with each has significant influences on future repurchase behavior for all brand proposed in the study. However, which perspective of consumer satisfaction has greater influence on repurchase behavior remain questionable and could be subject to further studies.

Sanzo et. al. (2003) analyzed the relationship among three variables, brand's satisfaction, consumers' attitudes and perceived quality of honey, a traditional agro-food product in Spain. Attitude was being used in the study due to strong relationship between customer attitudes and their behaviors while to relate it to satisfaction, attitude has direct relationship with quality perception and this attitude therefore can determine the level of satisfaction. This relationship exists caused by three components existed in attitude; cognitive, affective and behavioral which can be referred to beliefs or bonds established between attribute and object. Feelings, emotions and state of mind consist in the later component while the third component consists of actions. All items consist in the three components experienced by customer in relation to the purchased object. The result revealed quality dimension of honey does not seem to determine customer satisfaction. Nevertheless, honey's quality shows an indirect influence on customer satisfaction.

Various amount of works have been done in this study yet there are several who try to understand the brand switching behavior of the customers in relation to satisfaction of the product. In her research, Shukla, (2004) addressed the effects of product usage and brand switching behavior resulted from level of satisfaction towards five different product categories; television, vehicle, soap, ice-cream and hair oil. Brand switching behavior posed addition cost for producers in attracting new customers (Sanzo et. al. 2003). The result observed that both product usage and related level of satisfaction are unable to explain the swathing behavior of brand in any products category. However, their readiness to switch brand was moderated by product involvement. The study is important to marketers in knowing that satisfaction of customers will not provide any guarantee to marketers about brand loyalty. There are always new products in the market and customers with low-risks, higher certainty and high-knowledge group were reported to have higher purchase intention (Tuu and Olsen, 2012). However Espejel et. al. (2008) in their studies showed greater level of customers' loyalty and purchase intentions led by higher satisfaction on food products.

2.5   Factors Influencing Customer Satisfaction

Customer satisfaction is a measure between products and services supplied by a company and customers' expectations which are frequently used in marketing area. Customers will experience the products and services provided by producers (Gaur and Arora, 2014).

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A positive experience of product quality is the most important factor in determining satisfaction with mobile phone products other than the level of call charges, the level of service chargers and satisfaction with the service provider (Goode et al. 2005). Other showed convenience in using smartphone is the most important factor in determining customer satisfaction and followed by faster communication (Gerogiannis et al, 2012). Complexity of smartphone devices is a negative factor for satisfaction and will discourage willingness to buy smartphone devices. Kim et al (2013) found that user's motivation are driven by functional, hedonic and social encourage user's value and satisfaction. Functional motivation consist of efficiency and ease of use while hedonic motivation consist of enjoyment and pleasure while social motivation consists of desire to connect with others. Among the variables listed, social motivation such as desire to connect and share with others will influence users' satisfaction which eventually leads to continued engagement intention with smartphone.
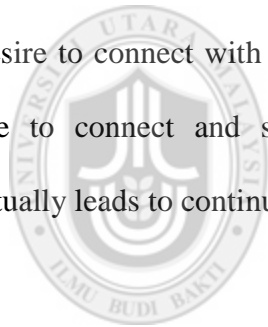
2.6   Country of Origin (COO) and Customer Satisfaction

Country of origin is a country where a product's brand and marketing are done and where corporate headquarter is located (Johansson et al. 1985; Ozsomer and Cavusgil, 1991). Country of origin effect is an evaluation of consumers toward products with the influence of country's image. The term country of origin is interchangeable with a country image since country image refers to perception of consumers toward products or services from a particular country in a way of the country's production and strengths or weaknesses of it marketing (Cengiz and Ayyildiz, 2007). As for this study,

the product involved is trending and widely accepted in more than the country of producer itself. Therefore, country of origin is an important variable to be considered when studying consumers' evaluation towards global or foreign products such as smartphones (Jimenez and Martin, 2009).

A study by Pecotich and Ward (2007) in Australia towards personal computers and computer products regarding country of origin and purchase decision indicated that both type of customers, novices and experts showed a preference towards domestic products with price and quality taken into consideration. Consumers' knowledge and brand familiarity also play important role in product evaluations. Consumers will rely on country of origin to evaluate unfamiliar products and brands and vice versa if the brand name is familiar (Schaefer, 1997).

Customer satisfaction leads to behavioral customer loyalty and is regarded to be stronger factor as compared to product quality and competitive prices to customers' loyalty (Cater and Cater, 2009). This relationship was supported by Yang and Peterson (2004) who suggested improving customer satisfaction if sellers want to generate customer loyalty. Customer satisfaction mediates the relationship between customer values and loyalty in which customer satisfaction is affected by two dimensions of customer loyalty, namely recommendation and patronage (Lam et al. 2004).

Country of origin is associated with a reputation of firms which is related to customer trust which becomes an important relational exchange factor. Country of origin perception enhances the relationship between satisfaction and trust in term of more positive feeling that customers have about certain foreign firms, the more satisfaction

affects trust (Nijssen and Herk. 2009). Other study by Siringoringo et al. (2013) suggested that there is no direct influence of satisfaction on trust for imported products particularly electronic that differs based on country of origin such as Chinese products. Country image or country of origin of a brand is considered important to young consumers in buying electronic products such as laptops and mobile phone since it is linked to their thinking that products originated from industrial countries with lots of experiences produce higher quality electronic products and this can also be related to the different level of technological development. Products with different level of involvement such as laptop (high involvement) and mobile phone (low involvement) is not daily products to buy .Therefore, they try to make a right decision when purchasing it and looking to satisfy themselves for uniqueness through well-known brands that belong to famous, more developed countries such as Japan (Moradi and Zarei, 2012). Thus, the following hypothesis is highlighted:

H1: Country of origin is positively affecting Malaysian consumers' satisfaction in using smartphone.

2.7   Product Features and Customer Satisfaction

Product features are considered important aspects in building a competitive advantage (Al-kwifi and McNaughton, 2011). Al-kwifi et al. (2014) also found that product features came out as the most important factor for consumers in the decision to switch between technologies offered as this factor reflects product capabilities and

competitive advantage. Adding features to products can enhance the appeal of a product and increase competitive advantage (Glasscock and Wogalter, 2006).

In electronic commerce, product features such as price, quality, reliability and consistency while website quality such as ease of use, navigation, accessibility are important elements in determining customer satisfaction with future purchase decision (Tabaei et al. 2011). The overall performance of system and ease of use tailored to each individual needs increased performance and satisfaction in using mobile phones and eventually led to improving communication skills, self-confidence and engagement in social activities for disabilities (Nguyen et al. 2008).

Product features can lead to dissatisfaction or feature fatigue after consumers experienced them for sometimes. It happens when consumers assign more weight to product capabilities and put less weight on product usability in their evaluation process before usage. Thompson et al. (2005) found that increasing number of features on electronic products such as digital video player for enhancing product differentiation has a positive effect on perceived capability but lead to negative effects on perceived usability. Thus, consumers may become frustrated when consumers' preferences changed after their experiences with the product which contradict to their initial preferences that do not minimize their long term satisfaction. Haverila (2011) regarded battery and talk time as the most important features that can satisfy users. Other three preferences discovered among users are business functionality, aesthetics and designs and standard parts and processes correlated with satisfaction and only business functionality leads to repurchase intention or behavioral loyalty.

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Ling et al. (2007) proposed different aspects of mobile phone feature satisfied by consumers. Rather than having technology-driven design full of features which are difficult to use, consumers regard physical appearances, sizes and menu organizations to be the most important design features of all which contribute to 425 of total variance satisfaction. Other factors that receive less satisfaction rating from consumers are game, battery duration, keypad design and many others. However, this study was conducted for the non-smartphone device and involved a more conventional mobile phone before smartphone was introduced and widely accepted in the society. With reference to the importance of product features and satisfaction, the following hypothesis is proposed:

H2: Product feature is positively affecting Malaysian consumers' satisfaction in using smartphone.

2.8   Brand Image and Customer Satisfaction

Brand image has been defined as quality perception made by consumers with association to the brand name (Aaker and Keller, 1990). On the other hand, Wood (2000) defined brands as an image in consumers' mind. Brand image is important in a way that images of brand is built by consumers through fleeting moments over time and linked to both every day moment and special occasions in their lives (Rindell and Iglesias, 2014). Consumers' memory holds brand associations which reflect consumers' perception about a brand.

Corporate store image or brand image does influence customer satisfaction and eventually leads to customer loyalty (Martenson, 2007). Customers consider grocery

stores as a brand based on how retailers perform their jobs such as neat and pleasant store which understands their needs. Similar study of different setting in hotel industry revealed both hotel brand representing brand image and customer satisfaction are factors in determining customer loyalty in that satisfaction is on products and services provided by the hotel such as reception, food and beverages, price and housekeeping. It also becomes an indicator in determining whether customers will repurchase from the similar hotel brand (Kandampully and Suhartanto, 2000). Loyalty is highly related to customer satisfaction and image in a way that image is indirectly related to loyalty in bank industry via perceived quality while service quality have direct and indirect influences on loyalty through customer satisfaction (Bloemer et al, 1998)

According to Brunner et al. (2008), the importance of both brand image and satisfaction can be differentiated according to different level of consumer experiences with the product or services. Brand image has become a strong predictor for loyalty to experienced customers while new consumers' satisfaction is crucial for their initial experiences with the service or product while considering image being a smaller role in term of loyalty. Loyal consumers are less sensitive to the current services and satisfaction and thus will give the company another chance.

A study conducted in China focusing on brand image and customer satisfaction indicated that a good brand image within Chinese mobile phone market enhances customer satisfaction and experiences for a long term and eventually leads to loyalty and commitment of market offering (Ogba and Tan, 2009). Other study linked brands, retailers and consumers in electronic and computer products in a way that retailers can benefit from the brand sold or brand produced by the manufacturers through customers

purchase intention. In the study, brand trust and satisfaction have an impact on retailer purchase intention but still this impact is mediated through customers' trust towards retailers and customer satisfaction. It can be concluded from the study that both manufacturers and retailers can benefit from powerful brands and manufacturer's name when consumer s are satisfied with the brand sold. For instance, customers would likely refer their computer as Compact brand rather than specific model of the product itself (Zboja and Voorhees, 2006). Based on all these arguments, the following hypothesis is proposed:

H3: Brand image is positively affecting Malaysian consumers' satisfaction in using smartphone.

2.9   Product Judgment and Customer Satisfaction

Judgment or brand judgment is a personal opinion or evaluation made by customers with regard to the brand or product (Keller, 2001). Kabecha (1997) proposed that judgment made by consumers toward a product is based on price and quality. However, the result of the study revealed that quality judgment made towards informal sector products leads to product purchase. However, the informal sector product is not satisfied with respect to products appearances, finish and workmanship. This falls under product quality category with different levels of technology used in the making of the product involved. Klein et al (1998) also measured product judgment made by customers based on the quality of product. Chinese consumers judged the quality of Japanese products before making any purchases.

Ozcan and Sheinin (2012) studied about how consumers judge and understand products based on multi-attributes and complete feature. Products categorized under competitive product assortment with more complete multi-attribute such as Colgate Total are preferred over less-attribute that are customized to certain group of consumers. However, dissatisfaction may follow post-purchase for products with too many features and lead to frustration. As such, the hypothesis is predicted as follows:

H4: Product Judgment is positively affecting Malaysian consumers' satisfaction in using smartphone.

2.10   Social Influences and Customer Satisfaction

Social influence is the degree of influence an individual has on another and various social factors are analyzed to measure it such as social similarity, social centrality and trusted relationship of each individual member (Christensen and Schiaffino, 2014). Social influence involves a process of drawing on power stemming from an individual's position, skills, charisma, accessing to material possessions and expertise (Saulwick and Trentelman, 2014).

Customer satisfaction and loyalty are two factors that determine the performance of the firms in service sector in a way that an organization can maintain customers' loyalty when customer satisfaction increased. Quality provided by an organization will enhance customer satisfaction by managing both tangible and intangible resources such as brand image (Segoro, 2013). A study by Segoro (2013) revealed social influence, attitude, switching cost, prior switching behavior and variety seeking that represent

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mooring factors is proven to be moderating variables of service and relationship quality to customer satisfaction. Nayebzadeh et al. (2012) used informational and normative elements under social influence for purchasing product. Informational element is when customers seek information through observations and normative element is when customers verify purchase with others or to impress others. The result showed that consumers who accept social influence and actively seek information when making purchase have lower tendency to buy and life satisfaction is related to cognitive dimension of impulse buying.

The influence from siblings is also a determinant variable for customer satisfaction when purchasing a new car (Belgiawan et al. 2013). Siblings and parents have significant correlation with satisfaction level since this influences the group to understand better what students need especially when purchasing a car. Dhaha and Ali (2014) found an indirect effect of social influence on customer satisfaction with the intention to use technology as the mediator for the study of factors affecting adoption and satisfaction with third generation (3G) of mobile phone. Social influence has significant effect on intention to use 3G technology among Generation Y that eventually leads to satisfaction.

H5: Social influence is positively affecting Malaysian consumers' satisfaction in using smartphone.

2.11   List of Hypotheses

Number	Hypothesis
H1	Country of origin is positively affecting the Malaysian consumer satisfaction in using smartphone
H2	Product feature is positively affecting the Malaysian consumer satisfaction in using smartphone
H3	Brand image is positively affecting the Malaysian consumer satisfaction in using smartphone
H4	Product Judgment is positively affecting the Malaysian consumer satisfaction in using smartphone
H5	Social influence is positively affecting the Malaysian consumer satisfaction in using smartphone

2.12   Research Model/ Framework

<u>**Independent Variable**</u>   <u>**Dependent Variable**</u>

Product Factors

```
┌─────────────────────┐
│                     │
│  Product Judgment   │
│                     │        H1
└─────────────────────┘

┌─────────────────────┐
│                     │
│  Product Feature    │
│                     │        H2
└─────────────────────┘                                   ┌─────────────────────┐
                                                          │                     │
┌─────────────────────┐                                   │    Satisfaction     │
│                     │                                   │                     │
│   Brand Image       │                                   └─────────────────────┘
│                     │        H3
└─────────────────────┘
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External Factors

```
                                  H4
┌─────────────────────┐
│                     │
│  Country of Origin  │
│                     │
└─────────────────────┘


┌─────────────────────┐
│                     │
│  Social Influence   │        H5
│                     │
└─────────────────────┘
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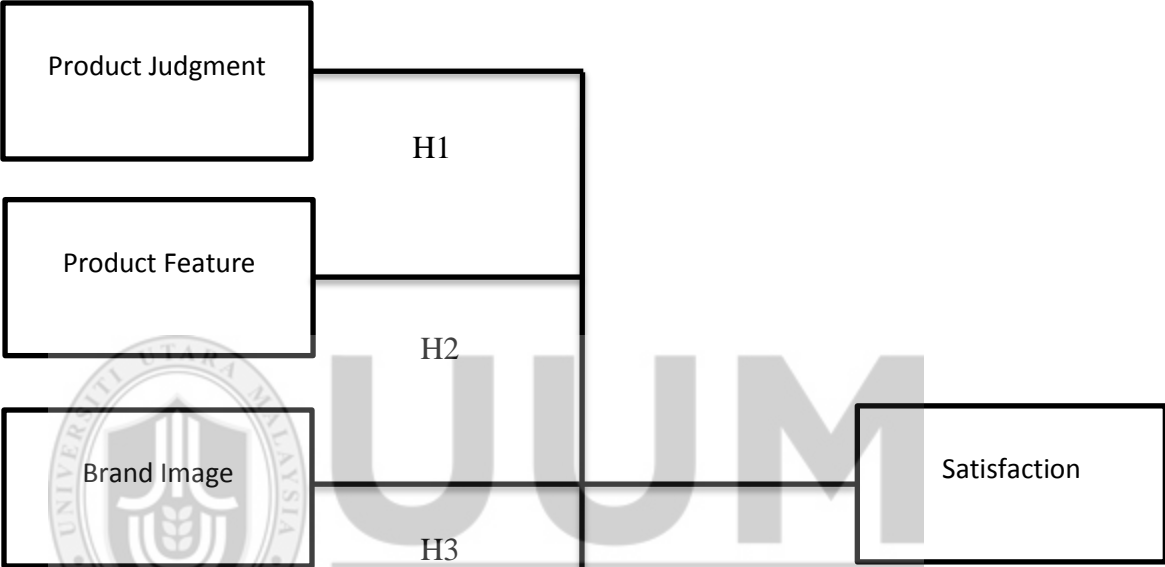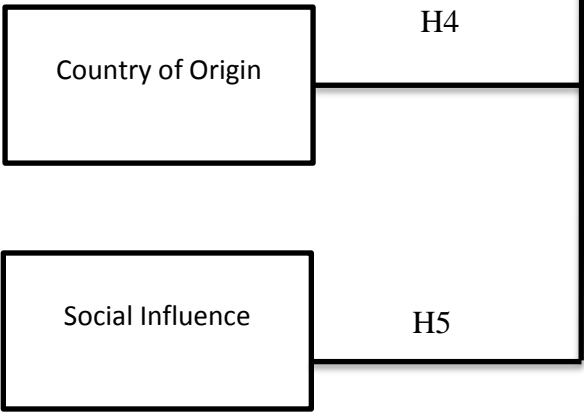
2.13   Summary

This chapter discussed the theoretical and practical aspect of factors affecting customer satisfaction. This section is builds to a clear insight to the previously related study and has a better picture to the overall study. The listed variables used in previous study under this section become a leading factor other than understanding the changes made throughout the similar topic through times. Therefore, this section is important to shed light and provide guidelines for further clarify what factors lead to customer satisfaction notably in smartphone industry.

CHAPTER THREE

METHODOLOGY

3.1   Introduction

In this chapter, methodology employed the study of factors affecting smartphone's satisfaction is discussed which comprise of seven sections. Firstly, theoretical framework is constructed; followed by research design, research instrument and sample used for this study. The research approaches used to collect data and then analyze the data are explained in order to achieve the research objectives. Finally, in this chapter the researcher also presents the statistical method employed.
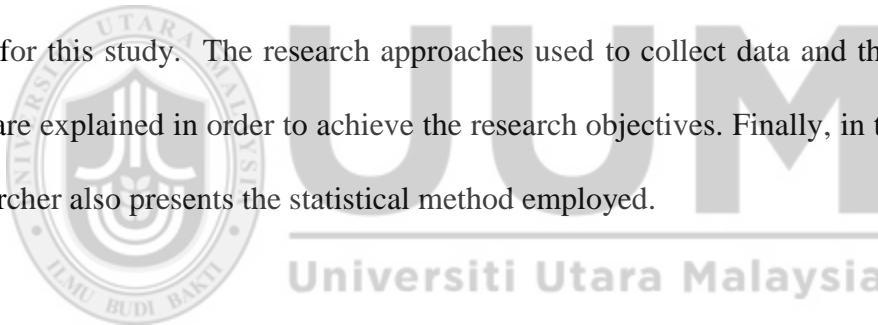
3.2   Research Design

According to Zikmund et al (2013), research design is defined as a master plan that specifies procedures and methods for the purpose of collecting as well as analyzing needed information. In other words, it is a framework that guides the researcher for the data collection which is used to test the hypothesis. Therefore, the objectives of the study determined during the early stages of this research are included to ensure that the collected information is appropriate for solving the problems. Also, before the method used in this research is clarified, it is argued that there is no single best research design.

Therefore, several alternatives are available for the researcher to choose which can help accomplish the stated objectives.

3.3   Research Instrument

Research instrument is a way to collect information needed. The information can be obtained from several methods available to be used such as through experiments, secondary data, observation and survey, which is also known as questionnaires. Of all the available methods used to collect data, questionnaires is the most popular method because of many reasons, among of which is it covers a large number of respondents and inexpensive. Therefore, the data collection method employed in this study is done by using the questionnaire method. There are two sections, Section A consists of instrument items related to both independent and dependent variables used in this study and as stated in previous chapter. Section B consists of gender, age, nationality, race, level of education and some other basic questions regarding respondents' demographic information.

There are five independent variables while one for dependent variable which is divided separately as follow:

1. **"Country of Origin"** consists of five items that are adapted from Sanyal & Datta (2011)

2. **"Product Feature"** consists of five items that are adapted from Sainy.(2014)

3. **"Brand Image"** consists of five items that are adapted from Gharleghi (2013).

4. **"Product Judgment"** consists of six items that are adapted from Klein et al. (1998)

5. **"Social Influence"** consists of four items that are adapted from Thing et. al (2011)

6. **"Satisfaction"** consists of five items that are adapted from Stephen J. Newell (2011)

The Likert scale is used in this study to obtain a statistical measure in Section A. Respondents are asked to indicate their level of agreement with a given statement in the form of an ordinal scale, in which this scale is commonly seen as a 5-point scale ranging from 'Strongly Disagree" to "Strongly Agree" at both end while "Agree", "Neither" and "Disagree" in the middle. This psychometric response scale is developed as a mean of measuring psychological attitudes in a scientific way (Bertram, n.a.). According to Hartley (2013), Likert-type scale is good for the study to see large sample sizes which in turn, increases the validity of the findings. Also, previous studies indicated the adaption of scale developed by previous researchers for use in their studies, of which commonly used five to seven scale points although it is more appropriate for some investigators to create their own scales. The questionnaire has been designed according to Liker-scale ranging from (1) strongly disagree, (2) disagree, (3) neutral, (4) agree and (5) strongly agree.

3.4   Research Sample

The sampling process involves identifying and determining the population for this study. The target population of this study is people who live in the Northern Malaysia such as

Perlis and Kedah states. This sample includes all students and workers in those areas. Generation Y is chosen based on their highest level of involvement in accepting smartphone compared to other younger or older groups in Malaysia. Research from Morris and Venkatesh (2000), suggested that age differences is one of the factors that affects intention to use an information system and adoption in technology.

Convenience sampling method is used since all respondents are easy to reach. Sample size is determined based on a table provided by Sekaran (2013) according to the target population. According to the Department of Statistics Malaysia (2010), the total number of urban population in Perlis and Kedah for Generation Y aged from 20 to 38 years old is 38,255 and 125,034 people respectively. Therefore, the total number of target population for this study is 163,289 people. These urban areas cover main cities in both states which are Kangar, Sungai Petani and Alor Setar. Based on the table of sample size by Sekaran (2013), the sample needed for the population reached 75,000 people and above are 382.

3.4.1 Generation Y and Smartphone

This generation is dependent on their smartphone by actively using various social networking sites and applications from chats to games as an extremely important part of their daily life (Roy et. al, 2013). The factors influencing Generation Y preferences of smartphone rather than laptop is due to its convenience which is considered as smarter and lighter design and product features ranging from camera resolution to faster operating system (Fah et. at., 2013). University students are the heavy users of this device since the device is used to stay connected with friends thus reflecting the easily

use of this device. Social influence plays an important role in affecting students'
dependence on smartphone (Aslam & Arif, 2014). Smartphone proves to be useful when
purchasing in supermarket by using their phones while in stores to research and compare
products' prices online. Friends available in social media are being used as a reference
before making purchases (Pelet and Lecat, 2014).

3.5   Data Collection Method

Fundamentally, this study employs survey which is known to be the most common
method of generating primary data in business research (Zikmund, Babin, Carr and
Griffin, 2013). This study shall employ two ways of administering survey which is by
email and by hand.

The distribution of questionnaires through email is sent to each prospective
respondent accompanied with a cover letter explaining about the purpose and objective
of the study. As for the normal distribution by hand, the respondents are explained about
the objectives of the study and the feedback expected from each of the respondent.

3.6   Statistical Method

The data is analyzed using a quantitative method which is Statistical Package for the
Social Science 19.0 (SPSS). The researcher uses descriptive statistics method as a way
to compile and interpret the raw data. The data will then be processed in a more concise

form. In this study, several statistical techniques are used which are frequencies distribution, correlation and multiple regression analysis for testing the collected data.

3.7   Questionnaire Design

In designing and administering the questionnaires, several steps have been taken to ensure the applied instrument used in data collection method is relevant to the research objective. The steps involved for the questionnaire design are by searching through past literatures to identify measurement items which best fit the construct under study, adapting some terms and words to increase apprehending of respondents towards items. Since the respondents involved various racial groups and Malaysians use Malay Language as their main language, it requires translation into both English and Malay Language, so that any targeted respondents from various educational backgrounds could understand it easily.

The following steps involve screening and verifying the suitability of items for each variable and questionnaire layout by referring it to the experienced expertise and lecturers from other universities such as University Malaysia Perlis (UniMAP) and modification is made afterward according to their advices. The completed questionnaires are made available to the respondents by hand, email and through social media which is Facebook. The questionnaire consists of two main sections, Section A and Section B. For Section A, it comprises of all five independent variables and one dependent variable and requires respondents to select the best option representing their experiences on five-point Likert Scale given. Section B is asking about demographic information or the

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respondent's background that is basically used by past researchers in their questionnaire studies format and some are adapted to match the product presented in this study.

3.8   Pilot Test

The main purpose of the pilot test is to evaluate whether the variables are perceived to be applicable on the satisfaction of customers. Also, apart from analyzing the understandability of respondents towards each question, it also helps the researcher to determine the reliability of each variable. This small study is conducted to determine data collection instrument, sample recruitment strategy, research protocol and other research techniques in preparation for a larger scope other than an important stage to identify problem areas in the instrument prior to full study's implementation (Hassan et. al, 2006). For this purpose, 30 sets of questionnaires are distributed to and collected from targeted respondents who represent the intended population. All results are shown to be reliable for this study. The reliability for brand image is 0.906, for country of origin is 0.944 and for product feature is 0.874. Finally, product judgment, social influence and satisfaction are 0.872, 0.795 and 0.832 respectively.

3.9   Summary

This chapter reveals the methodology adopted for this study of the factors affecting smartphone's satisfaction of customer. This study is descriptive in nature and employs a survey method, or questionnaire to be specific. This study uses simple random sampling, thus the questionnaires are distributed to Malaysia citizens with the target specifically to Generation Y who live in the Northern region of Malaysia which are Perlis and Kedah states.

CHAPTER FOUR

DATA ANALYSIS

4.1   Introduction

This chapter will discuss the result of the study that has been conducted. And for that, the data analysis and presentation of the results are based on the objectives previously described in the first chapter of this study. This data analysis is performed using the software Statistical Package for Social Science (SPSS) version 20. There are several sections made up in this chapter which starts with sample characteristic in Section 4.1. Section 4.2 is a data screening for finding errors and followed by section 4.3 for background of respondents. The descriptive statistic of the variables are done under section 4.4 followed by testing the hypothesis such as stated in Chapter 2. The final section of the chapter is a summary for the analyzed result with the hypothesis support.

4.2   Sample Characteristic

A total of 410 questionnaires are distributed to stated sample consisting students of both undergraduates, postgraduates and workers in various sectors of which all are categorized as Generation Y ranging from 20 to 38 years old. All of them are studying or working in the Northern area of Peninsular Malaysia. To be specific, several public

universities are targeted for the sample which are Universiti Malaysia Perlis, Universiti Utara Malaysia and Universiti Teknologi MARA as most university students are categorized as Generation Y. Due to time and cost constraint, the questionnaires are distributed to several locations only with the help from friends and acquaintances while other institutions such as polytechnics and colleges are ignored. Despite 410 completed questionnaires distributed, yet the usable sets are only 391 and of which still exceed the minimum of 382 respondents as required by researcher based on Sekaran's measure for the population ranging from 75 000 to 1 000 000 people. Therefore, only 382 sets of completed questionnaires are used for this study to represent a 163, 289 Generation Y living in the two northern states of Malaysia.

4.3 Data Screening and Cleaning

In order to prepare the data file, it is essential to follow some steps to ensure the data set is free from errors. Screening and cleaning the data are the processes involved for checking any errors on each of the variable and subsequently finding and correcting any errors in the data file (Pallant, 2013). All values are recorded to be within the range of possible scores. For this, frequency test conducted indicates no error in coding and data entry as all values fall in the range of possible values. Despite this, some questions in several sets of questionnaire remained unanswered thus the sets are excluded from being used for this study.

4.4   Background of the Respondent.

Among the total of 382 respondents, majority of them are female with as many as 265 respondents comprising of 69.4 percent. The rest with much lower number of 117 is male respondents. In age category, all respondents are aged between 21 to 35 years old at 100 percent. The details are shown in Table 4.1 and Table 4.2.

Table 4.1 Respondents' Demographic Factors

Gender				
	Frequency	Percent	Valid Percent	Cumulative Percent
Male	117	30.6	30.6	30.6
Female	265	69.4	69.4	100.0
Total	382	100.0	100.0	

Table 4.2 Respondents According to Age

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
21-35 years old	382	100.0	100.0	100.0

Overall, there are eight different races of respondents who responded to this questionnaire comprising of Malay at 69.9 percent, Chinese at 19.6 percent, Indian at 8.1 percent, Siamese at 1 percent, Kadazan Dusun at 0.5 percent and 0.3 percent for Iban, Melanau and Dayak respectively.

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Table 4.3 Ethnicity of Respondents

Ethnic

	Frequency	Percent	Valid Percent	Cumulative Percent
Malay	267	69.9	69.9	69.9
Chinese	75	19.6	19.6	89.5
Indian	31	8.1	8.1	97.6
Siamese	4	1.0	1.0	98.7
Iban	1	.3	.3	99.0
Melanau	1	.3	.3	99.2
Dayak	1	.3	.3	99.5
Kadazan Dusun	2	.5	.5	100.0
Total	382	100.0	100.0	

The survey also includes educational level of respondents. The result from the data reveals that most respondents are pursuing a higher level of education with bachelor degree which is as many as 308 respondents comprising of 80.6 percent surpassing other levels of education. There are about 59 respondents or 15.4 percent pursuing master degree level followed by 14 respondents at 3.7 percent in diploma level. The highest educational level ever recorded in this study is PhD level consisting of one respondent.

Table 4.4 Educational Level of Respondent

Highest Level of Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Diploma	14	3.7	3.7	3.7
Bachelor Degree	308	80.6	80.6	84.3
Master	59	15.4	15.4	99.7
PhD	1	.3	.3	100.0
Total	382	100.0	100.0	

At the top number of career position is led by public employees at 2.4 percent and followed by private employees at 1.6 percent. In professional careers or lecturers, there is 1 percent. Students comprises of 95 percent of total sample which means 363 out of 382 samples are university students with no particular income.

Table 4.5 Occupations of the Respondents

Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Student	363	95.0	95.0	95.0
Lecturer	4	1.0	1.0	96.1
Public	9	2.4	2.4	98.4
Private	6	1.6	1.6	100.0
Total	382	100.0	100.0	

In relation to smartphone brands, 155 respondents or 40.6 percent use Samsung, making it as the highest brand being widely used among respondents. It is followed by Lenovo at 14.7 percent and Apple iPhone at 12.6 percent. Other less yet still popular brand being used among respondents are Sony, Asus and Oppo with as much as 9.2 percent, 7.3 percent and 4.7 percent respectively. Some of the other brands that are being used lesser are Vivo, Huawei, Xiaomi, Nokia, Ninetology, Alcatel, HTC and finally Blackberry which are all below 2.1 percent.

Table 4.6 Brand of Smartphone Use by Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Apple	48	12.6	12.6	12.6
Samsung	155	40.6	40.6	53.1
Vivo	8	2.1	2.1	55.2
Huawei	8	2.1	2.1	57.3
BlackBerry	1	.3	.3	57.6
Sony	35	9.2	9.2	66.8
Lenovo	56	14.7	14.7	81.4
Asus	28	7.3	7.3	88.7
Ninetology	4	1.0	1.0	89.8
Oppo	18	4.7	4.7	94.5
Alcatel	3	.8	.8	95.3
Xiaomi	8	2.1	2.1	97.4
Nokia	6	1.6	1.6	99.0
HTC	3	.8	.8	99.7
i-New	1	.3	.3	100.0
Total	382	100.0	100.0	

Most of the respondents up to 62.3 percent of them have only one smartphone in their possession while those who have two smartphones being used are approximately 29.6 percent. Respondents who have three smartphone are about 5.8 percent. The highest unit of smartphone used by a single person is six and this counted for 0.5 percent or 2 respondents only.

Table 4.7 Number of Smartphone Used

	Frequency	Percent	Valid Percent	Cumulative Percent
One	238	62.3	62.3	62.3
Two	113	29.6	29.6	91.9
Three	22	5.8	5.8	97.6
Four	5	1.3	1.3	99.0
Five	2	.5	.5	99.5
Six	2	.5	.5	100.0
Total	382	100.0	100.0	

4.5   Descriptive Statistic of the Variables

In ensuring the data is not violating any of the assumptions made by individuals, assumption is tested by obtaining descriptive statistics on each variable. Therefore, mean score and standard deviation are presented for each item such as presented in Table 4.8 to Table 4.13. As we can see from each table, the mean and standard deviation are calculated so as to observe the tendency of responses by respondents on variables. As shown in the tables, the overall mean score for all variables are above 3.0 and therefore

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the respondents agree to all variables listed in this study in influencing customer satisfaction.

Table 4.8: Means and Standard Deviation for County of Origin.

Descriptive Statistics

	N	Mean	Std. Deviation
a. I will prefer the brand that originates from a country rich in R&D	382	3.85	.816
a. I will prefer the brand that originates from a country with high level of technological advancement	382	4.01	.832
a. I will prefer the brand that originates from a country which maintains a high level of quality	382	4.13	.798
a. I will prefer the brand that originates from a country which maintains an image of more new smartphone development	382	3.87	.807
a. I will prefer the brand that originates from a country which is prestigious in term of smartphone manufacturing	382	3.85	.790
Valid N (list wise)	382		

Table 4.9: Means and Standard Deviation for Product Features.

Descriptive Statistics

	N	Mean	Std. Deviation
b. I like my smartphone's design	382	4.00	.784
b. My smartphone has more applications than basic hand phone	382	3.99	.816
b. My smartphone provides high quality of games	382	3.61	.935
b. My smartphone's internet accessibility is speedier than basic hand phone	382	3.77	.862
b. I use my smartphone due to its functional software	382	4.02	1.694
Valid N (list wise)	382		

Table 4.10: Means and Standard Deviation for Brand Image.

Descriptive Statistics

	N	Mean	Std. Deviation
c. Brand image is an attraction for me to purchase	382	3.94	.839
c. Brand image increase my social status	382	3.66	.936
c. I will consider the reputation of brand before purchasing	382	3.92	.833
c. Brand name is my priority when making a purchase decision	382	3.75	.886
c. I will consider the brand image when buying a higher price product	382	4.11	2.749
Valid N (list wise)	382		

Table 4.11: Means and Standard Deviation for Product Judgment.

Descriptive Statistics

	N	Mean	Std. Deviation
d. My smartphone is carefully produced and has fine workmanship	382	3.70	.720
d. My smartphone is generally of higher quality than similar products from other brands	382	3.66	.787
d. My smartphone shows a very high degree of technological advancement	382	3.71	.821
d. My smartphone shows a very clever use of color and design	382	3.71	.854
d. My smartphone is quite reliable and seems to last the desired length of time	382	3.71	.784
d. My smartphone is a good value for the money	382	3.76	.855
Valid N (list wise)	382		

Table 4.12: Means and Standard Deviation for Social Influence.

Descriptive Statistics

	N	Mean	Std. Deviation
e. It is important that my friends like the brand of smartphone I am using	382	3.14	1.042
e. The pressure from friends and family is likely influence the usage rate of smartphone	382	3.18	.998
e. I would buy a smartphone if it helped me fit in with my social group better	382	3.52	.971
e. I would be easily persuaded into using smartphone if i had a low self-esteem	382	3.31	.947
Valid N (list wise)	382		

Table 4.13 Means and Standard Deviation for Satisfaction.

Descriptive Statistics

	N	Mean	Std. Deviation
f. I am very satisfied with the quality of my smartphone	382	3.83	.815
f. I am satisfied with the purchase of my smartphone	382	3.86	.813
f. if I had to do it all over again, I would purchase the same smartphone	382	3.37	1.084
f. I am very confident that I made the right decision	382	3.74	.889
f. I am convinced I made the right decision to buy the smartphone	382	3.74	.831
Valid N (list wise)	382		

4.6   Hypothesis Testing

The hypothesis is tested by using Pearson correlation and multiple regressions from which the result will reveal the strength and direction of the relationship between dependent and independent variables and also the most influential variables among variables listed for the study. According to Pallant (2013), the relationship between variables can be determined by the value presented from -1 to 1. Also, this value helps to explain the strength of relationship. A perfect positive correlation indicated by value 1 while a perfect negative correlation between variables is explained by -1 while value 0 indicates no relationship.

4.6.1   Pearson Correlation

Table 4.14 Correlation between Country of Origin and Satisfaction

Correlations

		Country Of Origin	Satisfaction
Country Of Origin	Pearson Correlation	1	.268**
	Sig. (1-tailed)		.000
	N	382	382
Satisfaction	Pearson Correlation	.268**	1
	Sig. (1-tailed)	.000	
	N	382	382

** Correlation is significant at the 0.01 level (1-tailed).

H1: Country of Origin is positively affecting the Malaysian consumers' satisfaction in using smartphone.

Hypothesis 1 refers to the relationship between country of origin and consumers' satisfaction in using smartphone. The Table 4.14 shows that the r value or Pearson correlation is 0.268 and it is significant at 1% while the coefficient of determination is 7.18 % which indicates 7.18 % variance or explanation of the variance in country of origin score on the customer satisfaction. It is observed that country of origin correlated significantly to consumer satisfaction ($r = 0.268$, $p<0.01$) .Therefore, the null hypothesis is rejected.

Table 4.15 Correlation between Product Feature and Satisfaction

Correlations		Product Feature	Satisfaction
Product Feature	Pearson Correlation	1	.517**
	Sig. (1-tailed)		.000
	N	382	382
Satisfaction	Pearson Correlation	.517**	1
	Sig. (1-tailed)	.000	
	N	382	382

** Correlation is significant at the 0.01 level (1-tailed).

H2: Product feature is positively affecting the Malaysian consumers' satisfaction in using smartphone.

Hypothesis 2 refers to the product features and customer satisfaction in using smartphone. The Pearson Correlation value for product features is 0.517 and it is significant at 1%. This indicates that product features correlated significantly to customer satisfaction in using smartphone product ($r = 0.517$, $p<0.01$). Therefore, the hypothesis proposed is supported by the result and null hypothesis is rejected. The coefficient of determinant is 26.7 % that helps explain nearly 27 % of the variance in product feature's score on the customer satisfaction.

Table 4.16 Correlation between Brand Image and Satisfaction

Correlations

		Brand Image	Satisfaction
Brand Image	Pearson Correlation	1	.322**
	Sig. (1-tailed)		.000
	N	382	382
Satisfaction	Pearson Correlation	.322**	1
	Sig. (1-tailed)	.000	
	N	382	382

** Correlation is significant at the 0.01 level (1-tailed).

H3: Brand Image is positively affecting the Malaysian consumers' satisfaction in using smartphone.

Hypothesis 3 refers to the relationship between brand image and customer satisfaction in using smartphone. The Pearson correlation value for brand image is 0.322 and significant at 1%. Therefore, it is correlated significantly between brand image and customer satisfaction in using smartphone products and this result supports the hypothesis proposed while null hypothesis is rejected. The 10.4 % of coefficient of determinant value by brand image helps to explain the variance of score for customer satisfaction, (r =0.322, P<0.01).

Table 4.17 Correlation between Product Judgment and Satisfaction

Correlations

		Product Judgment	Satisfaction
Product Judgment	Pearson Correlation	1	.730**
	Sig. (1-tailed)		.000
	N	382	382
Satisfaction	Pearson Correlation	.730**	1
	Sig. (1-tailed)	.000	
	N	382	382

** Correlation is significant at the 0.01 level (1-tailed).

H4: Product Judgment is positively affecting the Malaysian consumers' satisfaction in using smartphone.

Hypothesis 4 refers to the relationship between product judgment and consumers' satisfaction in using smartphone. The value of Pearson correlation for product judgment is 0.730 and it is significant at 1%. This indicates that product judgment is correlated significantly to customer satisfaction in using smartphone products which support the hypothesis proposed. Hence, the null hypothesis is rejected. The coefficient of determinant value shows a 53.3 % of variance in explaining the customer satisfaction and thus recorded as the highest comparison to other variables listed in this study (r = 0.730, P<0.01).

Table 4.18 Correlation between Social Influence and Satisfaction

Correlations

		Social Influence	Satisfaction
Social Influence	Pearson Correlation	1	.272**
	Sig. (1-tailed)		.000
	N	382	382
Satisfaction	Pearson Correlation	.272**	1
	Sig. (1-tailed)	.000	
	N	382	382

** Correlation is significant at the 0.01 level (1-tailed).

H5: Social Influence is positively affecting the Malaysian consumers' satisfaction in using smartphone.

Hypothesis 5 refers to the relationship between social influences and customer's satisfaction in using smartphone. The Pearson correlation value for social influences is 0.272 and the significant is at 1% indicating that social influence is correlated significantly to customer's satisfaction in using smartphone products. Therefore, the hypothesis is supported and null hypothesis is rejected. The value for coefficient of determinant shows a 7.4 % of variance in explaining the customer satisfaction from social influence (r = 0.272, P<0.01).

Table 4.19 Correlation of Research Dimension

Variables	1	2	3	4	5	6
Country Of Origin (1)	1.00					
Product Feature (2)	0.289**	1.00				
Brand Image (3)	0.334**	0.303**	1.00			
Product Judgment (4)	0.380**	0.601**	0.419**	1.00		
Social Influence (5)	0.189**	0.131**	0.373**	0.312**	1.00	
Satisfaction (6)	0.268**	0.517**	0.322**	0.730**	0.272**	1.00

4.6.2 Multiple Regressions Analysis

In this section, multiple regressions are used to explore the relationship between variables of which include an independent variable and a number of independent variables. This is a set of more complicated technique to explore the interrelationship among variables listed in this study. There are somehow a number of different types of this analysis and however standard multiple regression is used for this study which measures predictive power of all independent variables. Also, the standard multiple regression is the most commonly used among all three types of multiple regressions.

There are assumptions in multiple regressions that allow a more sophisticated exploration of the interrelationship among the data. In this study, the collinearity diagnostic is used in order to pick up on problems with multicollinearity. Also, the normal probability plot of the regression standardized residual and the scatter plot are used to observe the possible outlier and normality.

Multiple regression answers two main questions in this study; (1) how well the all five of independent variables predict customer satisfaction and how much variance in customer satisfaction can be explained by the scores of all those five variables; (2) which is the best predictor of customer satisfaction from all five independent variables listed.

First, collinearity diagnostic is done through the values under Tolerance and Variance Inflation Factor (VIF). Tolerance is one of indicators used to measure how much variability of one independent that is not explained by the other independent

variables listed in the study. It can be calculated for each variable by using the formula 1-R squared. The VIF, however, is the inverse of the Tolerance value given its formula is 1 divided by Tolerance. The value show is said to show multicollinearity if the value for Tolerance is very small or less than 0.10 while the VIF value on the other hand is above 10. As the table 4.19 displays multiple regression analysis for collinearity statistics, the VIF value are ranged from 1.216 to 1.882 whilst for Tolerance value are ranged from 0.531 to 0.822 of which all values fall under the accepted range as described above. Therefore, it indicates that the collinearity problem does not exist in this study.

Table 4.20: Multiple Regression Analysis and Collinearity Statsitics

Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.268	.213		1.255	.210		
Country of Origin	-.030	.047	-.024	-.631	.529	.814	1.228
Product Feature	.138	.047	.130	2.951	.003	.626	1.598
Brand Image	.000	.035	.000	-.010	.992	.726	1.378
Product Judgment	.764	.057	.643	13.468	.000	.531	1.882
Social Influence	.058	.038	.058	1.524	.128	.822	1.216

The R Square value is used to measure how the listed independent variables explain the variance in the dependent variable. As shown in Table 4.20, the R Square value is 0.545 which explains that the independent variables used in this study help to explain about 54.5 percent of the variance in customer satisfaction. This answers the first question listed in this section of how much variance in customer satisfaction can be explained by scores on the five independent variables listed.

Table 4.21: Model Summary

Model Summary[b]

Mode 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.738[a]	.545	.539	.51627

a. Predictors: (Constant), SI, PF, COO, BI, PJ
b. Dependent Variable: STF

For the second question of which of the variable among the listed independent variables contributes to the prediction of the dependent variable. For this, each independent variable will be evaluated and compared based on the Beta value under the standardized coefficient table above. The highest value presented makes the strongest unique contribution in explaining the dependent variables. As for this study, based on Table 4.19 above, the highest value for beta coefficient is 0.643 that is shown by product judgment. This can be concluded that product judgment is the strongest contributor for the customers/ satisfaction (beta = 0.643) and followed by product features as the second strongest contributor to customer's satisfaction (beta = 0.13).

Social influence is the third strongest contributor (beta = 0.058) while the country of origin variable contributes as much as 0.024. Brand image shows no contribution to customer satisfaction with the beta coefficient at 0. This result answers the research question regarding which variable is the most influential factor for customer satisfaction. Also, as stated in the research question, all product factors influence customer satisfaction in using smartphone and product factors containing product judgment surpassing external factor in having greater influence on customer satisfaction.

4.7   Summary

The analysis conducted on all dimensions shows significant result on factors influencing customer satisfaction in using smartphone. The correlation analysis result for country of origin, product features, brand image, product judgment and social influence have positive and significant relationship with customer satisfaction. Among the result presented product judgment that being categorized under product factor shows the strongest contribution in explaining the satisfaction by customers while brand image is the lowest among all variables.

CHAPTER 5

DISCUSSION

5.1   Introduction

This section will be a discussion section for this study regarding a key determinant in influencing customer satisfaction for smartphone products. This chapter is organized into several sections based on different individual variables used in this study. Section 5.2 will describe the country of origins and customer satisfaction and followed by section 5.3 which is about product features and customer satisfaction. Section 5.4 will be discussing brand image and customer satisfaction while Section 5.5 is about product judgment and customer satisfaction. Social influence and customer satisfaction will be discussed in Section 5.6 before this chapter ends with the summary about the finding.

5.2   The Effect of Smartphone's Product Factors and External Factors on Customer Satisfaction

This part summarizes the finding based on the objective of the study. The issues in this study are the customer satisfaction in smartphone product and external factors that will influence Malaysians Generation Y in purchasing the products. There are changing trends in using smartphone based on brand and operating system preference coming with each smartphone over time and this causes lower demand on certain brands and

suddenly being increasingly used of other brands by many people and this varies from country to country. To ensure the competitiveness of the producers, we need to know the factors that influence customer satisfaction on their choices of smartphone. Among product features, brand image and product judgment that are categorized under product factors, which will influence customer satisfaction and which is the most influential factors. Besides, what is the impact posed by external factors such as country of origin and social influence to local consumer satisfaction. Finally, what will have greater influence on satisfaction between product and external factors? The following section will highlight the implications of these factors on customer satisfaction based on the strongest to the least influential elements.

5.3   The Most Influential Factors Between Product and External Factors

Between the two factors, product factors serve as the most influential elements to customer satisfaction in smartphone product category since the two of the highest relationship is shown by product judgment and product feature each with r = 0.730 and r = 0.517.

5.3.1   Product Judgment and Customer Satisfaction

Other critical component that affects customer satisfaction in this study is the judgment made by customers toward products used. This study proves that customer satisfaction can be influenced by customer judgment towards the product. The similar result was supported by previous study Ozcan and Sheinin (2012) regarding customer satisfaction and customer judgment towards product features. Customers will be satisfied if the features that come with the product are not redundant or complicate for their usage. On the other hand, the multiple regression analysis for this study of customer satisfaction towards smartphone in the northern area of Malaysia indicates the highest influence on satisfaction is contributed by product judgment beating the other four variables tested. The finding from the current study proves that product judgment in term of product quality, image of manufacturing nation, and price categorized under product attributes is important in increasing customer satisfaction for smartphone products.

As in previous study, product judgment is important in getting to know foreign products with multiple brands offered in the market. This includes the judgment of product quality, technological advancement of a country, design and appearance and durability. A country is associated with certain product based on several factors. For instance, products produced in China are associated with lower quality and less durable as compared to products produced by more developed countries of higher technological attainment (Ar and Kara, 2014). Therefore, as this study involves product category with multiple brands offered by more than one country and with different technological advancement, it is crucial to consider product judgment as another factor in determining customer satisfaction.

5.3.2 Product Features and Customer Satisfaction

The result in the previous chapter suggests that product features also influence customers in satisfying their usage toward smartphone product. The Pearson's correlation result revealed a strong correlation between product features and satisfaction thus supporting a previous study done by Tabaei et al. 2011 which postulated price, quality, reliability, ease of use, navigation and accessibility categorized under product features as the important element in determining customer satisfaction. The result from multiple regressions reveals product features as among the important elements to influence customer satisfaction other than product judgment tested in this study.

Product features with the most frequently looking forward by customers is smartphones' physical appearance, size and menu organizations (Ling et al., 2007). Product features could increase customer satisfaction in a way that the feature of the product is related to product quality. As expressed by Lambert (1980); Zhang and Lim (2003), product features with other characteristic comprise of brand reputation, store image, market share, country of manufacture and price is attributed to quality of branded products by consumers. This suggests the existence of relationship between product features and product quality. Customer satisfaction can be attained as product quality is achieved (Matzler and Hinterhuber, 1998).

The effect of new features in products can be seen in another study conducted by Nowlis and Simonson (1996). They revealed that products with inferior existing features will increase the relative value of the basic model when new feature is added to

it such as microwave ovens and cameras. Also with the added new features, it has decreased the difference between high and low quality brands in term of features. This could lead the customers to choose a product which offers a new feature over a product that does not.

5.3.3   Social Influence and Customer Satisfaction

External factors can also greatly influence customers' decisions towards their actions. In this study, social influence is categorized under a factor which comes beyond customer's own perception and opinion. The influence of friends and family members surrounding customers could somehow affect their decisions towards certain products. This study indicates the existence of a positive and significant correlation between social influence and customer satisfaction. It was supported by Segoro (2013) who found that the existence of social influence can lead to customer satisfaction. Belgiawan et al (2013) found the influence from siblings as a determinant variable to customer satisfaction for purchasing a car. In similar setting, Dhaha and Ali (2014) detected an indirect relationship between social influence and satisfaction of customers when it comes to use the 3G mobile phone.

Suki (2013) found a strong relationship between social influence and dependence on smartphone which later leads to students' purchase behavior on smartphones. Social influence is regarded as an important input factor since it affects how consumers evaluate and accept the products. This can be consisting of friends and family members. Also, pressure from society has made this device a necessity within a social community. This is predominant especially among university students (Ting et al. 2011).

5.3.4   Country of Origin and Customer Satisfaction

The result proves that country of origin as a matter in determining customer satisfaction when using a smartphone among Generation Y in Malaysia. Thus, hypothesis H1 which predicts that country of origin is positively affecting Malaysian customer satisfaction in using smartphone is supported. Equally, a number of past studies have also obtained the similar results and indicated that country of origin is a good predictor for customer satisfaction (Lam et al., 2004; Nijsse and Herk., 2009; Moradi and Zarei., 2012). This indicates that young Malaysian consumers also regard the origin of country which produces smartphone as one of several important factors that influences their satisfaction. They also consider country of producers with high level of technological advancement and which maintain higher quality to be of their choices when they use a smartphone.

Despite its influence on customer satisfaction in this study, this variable is not the strongest as compared to product judgment and product features. However, it is still significant which could be due to a positive country image, country's knowledge and the effect of advertising in the mind of the customers. This result supports prior argument that consumers will rely and depend on country of origin for products evaluation on unfamiliar products or brands (Pecotich and Ward, 2007). Just in case customers are unfamiliar with the new product, it is reasonable for buyers to look for the country of origin labeled on each product to reflect their quality and followed by comparing their reasonable prices.

5.3.5 Brand Image and Customer Satisfaction

Brand image has been proven in this study to be another factor in influencing customer satisfaction. This result is similar to those from previous studies by Martenson (2007), Kandampully and Suhartanto (2000) and Ogba and Tan (2009). Customers perceive quality based on brand image of certain product which increases customer satisfaction. This result affects customers' behavior that is later followed by customers' loyalty towards similar brands and led to repurchasing intention. This outcome is in line with the definition of brand image that represents a customer's perception of a brand as reflected in their memory by the brand associations (Keller, 1993). This association on the other hand originated from both their direct experiences and information obtained. Brand image is easier for customers to keep in mind as this involves pictures and symbols as well as symbolic meaning which are associated to specific products or services. As a conclusion for this section, it shows that a good brand image will positively affect customer satisfaction and to some extent it can be a factor that motivates customers' loyalty.

5.4   Summary

Based on all the findings, it can be concluded that all five dimensions of the variables which consist of country of origin, product features, brand image, product judgment and social influence used in this study show existence of significance with all are having positive relationship with customer satisfaction. These findings are also consistent with previous studies regarding the usage of smartphone and customer satisfaction. Overall,

judgment of product by customers is the highest influence in determining customer satisfaction and followed by product features, social influence, country of origin and finally brand image with the least influence.

CHAPTER 6

CONCLUSION AND RECOMMENDATION

6.1   Introduction

The main objective of this study is to identify factors affecting customer satisfaction on smartphone products from two categories which are product factors and external factors. Thus, it is crucial for smartphone producers to consider product judgment and product features as the input for better production in the future. This applies not only in Malaysia. In fact, it is also beneficial to other countries with similarity in economic development and neighboring countries. Customer satisfaction is essential for company's market share and competitive advantage as continuous purchase yields higher profit other than reducing cost in gaining new customers. Word of mouth is a powerful marketing agent starting from satisfied and experienced customers or friends spreading the benefits of the products to inexperienced ones. At the same time, other elements in this study must not be given less attention as they also contribute in determining customer satisfaction.

6.2   Implication of the Study

The implications of this study will be explained based on theoretical and managerial perspectives. Theoretically, this study offers solutions to customers' selection of

products leading to their satisfactions. From a company's point of view, especially local company, the results obtained from this study could be utilized by the marketing and department to further improve product quality and performance in order to meet or even exceed customer satisfaction.

6.2.1 Theoretical Implication

As the Theory of Planned Behavior (TPB) suggested, in predicting customers' behavior, it consist of three stages before the actual action is implemented. The result of this study supports the Theory of Planned Behavior in a way that customers have incomplete power and control for their intentions towards certain action. In this study, customers are influenced by social interaction and people around them through the process of seeking information and sharing experiences. This exists in one of the three elements mentioned in the TPB which is under the perceived behavioral control.

The second element that determines a customer's intention towards certain behavior and action is behavioral attitude. The judgment towards each product as opposed to money spent determines the satisfaction achieved when it is also compared to their initial perception of smartphone before it is purchased. As all elements existed in this theory are significant with the result obtained, it can be concluded that TPB is the best predictor for customer satisfaction. Also, this current study contributes to the body of knowledge in the smartphone and electronic product category in determining customer satisfaction other than understanding customers' preferences and needs after making a purchase and experience the product. Besides that, the relationship between product judgment and country of origin to customer satisfaction in this specific product

category is unexplored in the past researches thus adding it to another contribution in this area.

6.2.2 Managerial Implication

Customer satisfaction is a key to successful business. However, not to mention smartphone producers and sellers who transform customers' needs, demands and tastes into good quality products to fulfill customers' expectations. For smartphone producers, this finding helps to explain the important aspects in which Malaysian consumers are looking forward for smartphone being introduced in the near future. This study helps new local producers to focus on customers' needs and wants, other than by helping existing players to strengthen their market position in such fast changing, and very competitive industry. As this study has suggested, customers will be satisfied in products that reflect the producer's country and highly associated it with any advancement in technology in the making of these products. Thus, this finding helps local companies to understand better what local customers want and what is more important to them. Understanding the customers will somehow reduce costly mistake of targeting wrong market and help local companies putting the money in research and development processes instead.

In addition, country of origin, brand image and product features will also stand as factors in determining customer satisfaction, which will be followed by repurchasing intention of similar brand. The existing individuals surrounding the customers also influence the way they judge and suggest good products for their friends and family

members. Information spread among society helps customers to make purchasing decision with the purpose of getting maximum satisfaction.

6.3   Limitation of the Study and Suggestion for Future Research

There are a few limitations on this research. First, regarding the location, this study employs a sample of two states comprising of 163,289 people only. Thus the study only covers the northern area of Peninsular Malaysia and is insufficient to apply the finding for the whole nation. Other than that, other states are excluded in this study with respect to different levels of economic development such as in urban and suburban states or those with strong global presence of high profile smartphone producers. These differences might somehow lead to different results.

The result obtained from this study cannot be generalized to the whole Malaysia since there are only two states involved and followed by a limited number of respondents involved. Therefore, it is crucial for the future research to include other states which are located in other parts of Malaysia in addition to the current study in order for the result to be generalized to the whole country.

Third, this study is meant to measure customer satisfaction among the largest group of consumers in this product category. Therefore, other than Generation Y, this study is neglecting the other three groups which are Generation X, baby boomers, and newer generations coming after Generation Y who also use smartphone in their daily lives. In addition, the younger generation after Generation Y is the other group the next researchers should focus on since they are embracing this particular technology at such a

very young age and might turn out to have different patterns in term of preferences, satisfaction and future purchase. Generation X is another group of customer for producers to pay no less attention as purchasing power and income is stronger in this particular customer segment. They are in the most secured job positions compared to other groups even though the number is lesser than Generation Y.

Fourth, the current study is focusing mainly on marketing perspective. It will be interesting if future researchers expand their studies to other areas such as influences from producers and their employees or healthcare perspective in order to better understand about consumers' behaviors and satisfactions.

6.4   Conclusion

This study has yielded a result regarding the key determinant of satisfaction among customers among Malaysian younger generation in smartphone product category. The result shows that the effect of variables such as product features, country of origin, brand image, product judgment and social influence are positive with all items are evidently influencing customer satisfaction towards smartphone products. Among all variables, the variable of product judgment has shown the strongest influence towards the dependent variable, hence implying the product and its producer's country to be as important factors before and after smartphone is purchased.

The findings of this study have answered all research questions listed in the previous chapter in which product factors as the main factor in determining satisfaction of consumers when it comes to smartphone while external factor to be a lesser element. Therefore, the main objective of this study regarding what factors affecting customer satisfaction in smartphone product category has been answered.

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